

### **REMARKS/ARGUMENTS**

Claims 8-18 and 25-29 have been resubmitted. Claims 1-7 and 19-24 have been withdrawn. Claims 8-9, 11, 14, 17, and 25 have been amended. No Claims have been canceled. No New Claims have been added.

The Examiner rejected Claims 8, 10-13, 16, 18, 25, and 27 under 35 U.S.C. §102(b) as being anticipated by Peterson et al. (U.S. Pat. No. 2,446,059).

The Examiner objected to Claims 9, 14-15, 17, 26, and 28-29 as being dependent upon a rejected base claim, but stated that Claims 9, 14-15, 17, 26, and 28-29 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **Restriction Requirement**

The Office Action acknowledged the Applicant's election without traverse of the invention of group II, claims 8-18 and 25-29, in the reply filed on 2/22/05.

#### **Claim Objections**

Claim 9 has been amended to include all the limitations of Claim 8 upon which it depends. Claim 14 has been amended to include all the limitations of Claims 11 and 13 upon which it depends. Claim 15 depends upon Claim 14 as amended. Claim 17 has been amended to depend upon Claim 14. Claims 26 and 28-29 have not been amended and the patentability of the base claim is instead argued below. The applicant has thus put Claims 9, 14-15, and 17 in a condition for allowance since they have either been rewritten in independent

form to include all of the limitations of the base claim and any intervening claims or else they depend upon such a rewritten claim.

Peterson et al. (U.S. Pat. No. 2,446,059)

Peterson et al. discloses a heat exchanger for a heater wherein the outer and inner shells of the heater are protected from high temperatures. The disclosure describes "one or more concentric passages within the outer shell through which the gases to be heated pass. A corrugated spacing member is disposed in each **passage** to form a plurality of separated axial **channels** for the gases." (Peterson, col. 1, lines 11-16). The shell disclosed by Peterson et al. is described as "an outer cylindrical pressure resisting shell 10" (Peterson, col. 2, lines 17-18). Furthermore, Peterson et al. discloses "A metal liner 35 is separated from the shell 10 to provide an annular air passage 36 therebetween and is positioned relative to the shell 10 by a corrugated spacing member 37 which extends around the entire periphery of the shell to separate the passage 36 into a plurality of independent **channels** as indicated at Fig. 2." (Peterson, col 3, lines 5-11).

The serpentine shape of Patterson, asserted by the Examiner as being formed by the corrugated spacing member, clearly forms a serpentine shape radially about the centerline of the outer shell, and not axially from one end of the outer shell to the other. As with any regular, cylindrical structure, all points along the centerline of the passage or channel, as disclosed by Peterson et al. and as asserted by the Examiner, must necessarily be along a straight line that will also project onto a plane as a straight line; in fact, according to Fig. 2 of Peterson et al., such a centerline of the passage or channel will be parallel to a centerline of the heater.

The applicant has amended Claim 8 to include the limitation of the cooling tube having "a centerline extending from the first end to the second end, wherein the centerline, the first end, and the second end are non-linear when projected onto a plane" (Amended Claim 8, lines 7-9). This amendment finds support in Applicant's specification at page 6, line 24 through page 7, line 7. The applicant has also amended Claim 11 to include the limitation that each cooling tube in the plurality of cooling tubes has "a centerline extending from the first end to the second end, wherein the centerline, the first end, and the second end are non-linear when projected onto a plane." (Amended Claim 11, lines 8-10). The applicant has amended Claim 25 to include the limitation that each cooling tube in the plurality of cooling tubes has "a centerline extending from the first end to the second end, wherein the centerline, the first end, and the second end are non-linear when projected onto a plane". (Amended Claim 25, lines 10-12). Finally, the applicant has amended the specification, paragraph 0025, to clarify the existing language for better understanding and to make the language of the claims and the specification compatible. The applicant believes and asserts that no new matter is added thereby.

The cooling tubes described by the Applicant necessarily have a serpentine shape in both a radial direction about the centerline of the combustor, as well as in an axial direction along the centerline of the combustor. This compound shape has the property that it cannot be projected as a straight line upon any plane and therefore the shape is "non-linear when projected onto a plane". Furthermore, the passages described by Peterson et al. are not tubes; but channels. According to the dictionary, a tube as used herein is "a hollow cylinder or pipe of metal, glass, rubber, etc., usually long in proportion to its diameter, used for conveying fluids, etc." The channels disclosed by Peterson et al. are not cylindrical in shape and cannot be bent to form the serpentine shape described by the Applicant without unacceptably deforming the corrugated spacing member. The bending of the tubes described

in Claims 8, 11, and 25 is disclosed by the Applicant in paragraphs 0032, 0033, and 0034.

Therefore, since Claims 8, 11, and 25 each contain the same limitation and since that limitation is not taught, disclosed, or shown in the disclosure of Peterson et al., then Peterson et al. cannot be used to maintain a §102(b) rejection with respect to Claims 8, 11, and 25. Accordingly, Claims 8, 11, and 25 as amended should be allowable. Since Claim 10 is dependent upon Claim 8, Claims 12-13 and 16-18 are dependent upon Claim 11, and Claims 26-29 are dependent upon Claim 25, then Claims 10, 12-13, 16-18, and 26-29 should also be allowable if Claims 8, 11, and 25 are allowable. Furthermore, the applicant submits that each of claims 8, 11, and 25 as amended define an invention which is unobvious over Peterson et al.

#### CONCLUSION

Reconsideration and withdrawal of the Office Action with respect to Claims 8-18 and 25-29 is hereby requested. Applicant submits that Claims 8-18 and 25-29 are now in condition for allowance.

In the event the examiner wishes to discuss any aspect of this response, please contact the attorney at the telephone number identified below.

Respectfully submitted,

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